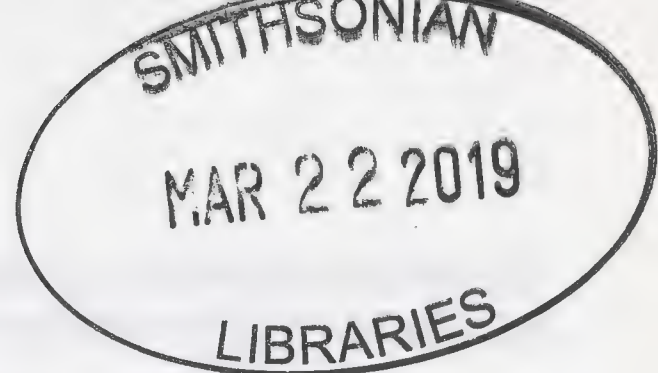




NOTEWORTHY COLLECTION

BAJA CALIFORNIA

The following 11 range extensions and new records are from collections made during an expedition in April 2017 to an area with several vernal lakes in the Central Desert ecoregion in the central portion of the state of Baja California, but are mostly plants not directly associated with the vegetation of this ecoregion or the vernal lakes. Most of these records are significant southward range extensions of plants from the California Floristic Province and extend their range into the Baja California Central Desert ecoregion. The collection of *Eragrostis barrelieri* Daveau is a new record for the state of Baja California, the collection of *Malacothrix coulteri* Harv. & A. Gray is the second record from the state with the previous one collected in 1882, and the collection of *Euphorbia petrina* S. Watson extends its range from the Lower Colorado Desert ecoregion to the Pacific drainage and the Central Desert. The previous distributional knowledge of species listed in these accounts is based on georeferenced specimens from various herbaria that are in the combined database of the Baja California Botanical Consortium, available on the website bajaflora.org (Baja-Flora 2018).

ARTEMISIA CALIFORNICA Less. (ASTERACEAE). Ensenada Mpio. (Municipio). Canyon draining into Laguna El Caporal from the northwest, west of Laguna Chapala and Laguna El Islote. 29.26960° N, 114.59020° W, elevation 365 m, 23 April 2017, *Rebman 33109* (SD). Growing in lower part of the canyon, primarily in alluvium from the canyon sides, which were composed of limestone on the south side and basalt on the north. Central Desert/Sage Scrub vegetation with *Aldama purissima* (Brandege) E.E.Schill. & Panero, *Ambrosia chenopodiifolia* (Benth.) Payne, *Bahiopsis laciniata* (A. Gray) E.E.Schill. & Panero, *Encelia asperifolia* (S.F.Blake) C.Clark & Kyhos, *Fouquieria columnaris* Kellogg, *Lycium* sp., and *Pachycereus pringlei* Britton & Rose.

Previous knowledge. A well known native of the California Floristic Province and an indicator species of Coastal Sage Scrub. This species ranges from the San Francisco Bay area of California into northwestern Baja California and offshore to Cedros and Guadalupe islands.

Significance. This collection extends the known range on the Baja California peninsula 35 km south from a previous collection near Cataviña, which is also disjunct from the main populations of this species on the peninsula. It grows here with plants

typical of the Central Desert ecoregion of Baja California.

CRYPTANTHA CLEVELANDII Greene var. *CLEVELANDII* (BORAGINACEAE). Ensenada Mpio. Vicinity of a small vernal lake: east of San José de la Piedra and south of Rancho El Llano; dry wetland area 29.30434° N, 114.66959° W, elevation 420 m, 23 April 2017, *Rebman 33139* (SD). Central Desert vernal lake vegetation with *Aldama purissima*, *Amblyopappus pusillus* Hook. & Arn., *Ambrosia chenopodiifolia*, *Bromus rubens* L., *Deinandra fasciculata*, *Lasthenia gracilis* (DC.) Greene, *Lycium californicum* Nutt. ex A.Gray, and *Marsilea vestita* Hook. & Grev.

Previous knowledge. A native coastal species of California and northwestern Baja California as far south as the San Quintín area.

Significance. This is a range extension of 180 km to the SSE and is the first record of *Cryptantha clevelandii* var. *clevelandii* in the Central Desert ecoregion.

DISTICHLIS BAJAENSIS H.L.Bell (POACEAE). Ensenada Mpio. Arroyo San José: east of San José de la Piedra and southwest of Rancho El Llano; saline flood plain area in arroyo. 29.32242° N, 114.77581° W, elevation 40 m, 24 April 2017, *Rebman 33180* (SD). Riparian vegetation with *Atriplex julacea* S. Watson, *Distichlis bajaensis*, *Distichlis spicata* (L.) Greene, *Frankenia palmeri* S.Watson, *Isocoma acradenia* (Greene) Greene, *Iva hayesiana* A.Gray, *Juncus acutus* L., *Prosopis glandulosa* var. *torreyana* (L.D.Benson) M.C.Johnst., *Suaeda nigra* (Raf.) J.F.Macbr., and *Tamarix ramosissima* Ledeb.

Previous knowledge. This is thought to be a very rare grass originally described from a single population (Bell 2010), now known from only four populations in the state of Baja California, ranging along the west coast from near Colonet to near Santa Rosalillita.

Significance. This adds a fifth population to the known occurrences of this species. This population is quite large, extending along the bottom of the arroyo for more than a kilometer. It seems likely that more populations of this species may exist in other arroyos in west-central Baja California.

ERAGROSTIS BARRELIERI Daveau (POACEAE). Ensenada Mpio. South of Miller's Landing and Rosarito and north of Villa Jesús María; along Mex. Hwy. 1; sandy, saline shoulder of the highway. 28.40666° N, 113.98971° W, elevation 37 m, 21 April 2017, *Rebman 33076* (SD). Ruderal vegetation with

Astragalus fastidius, *Chenopodium murale*, *Malva parviflora*, and *Mesembryanthemum crystallinum*.

Previous knowledge. This non-native, southern European, annual grass was introduced to Sonora and is now scattered in Mexico, the southern U.S., and southwestern California. It is known rarely from the state of Baja California Sur.

Significance. This is the first collection of *Eragrostis barrelieri* from the state of Baja California and the first record of it in the Central Desert ecoregion.

ERIASTRUM FILIFOLIUM (Nutt.) Woot. & Standl. (POLEMONIACEAE). Ensenada Mpio. Northwest end of Laguna El Caporal: west of Laguna El Islote and Laguna Chapala; in a small canyon on the northwest side of the dried lake and on lower slopes of the limestone cliffs of the canyon. 29.26960° N, 114.59022° W, elevation 365 m, 23 April 2017, *Rebman 33119* (SD). Central Desert/Sage Scrub vegetation with *Aldama purisimae*, *Ambrosia chenopodiifolia*, *Artemisia californica*, *Bahiopsis laciniata*, *Encelia asperifolia*, *Fouquieria columnaris*, *Lycium* sp., and *Pachycereus pringlei*.

Previous knowledge. This species is known from northwestern Baja California extending as far south as the area of El Rosario and north into coastal Southern California (Rebman et al. 2016).

Significance. This collection extends the range 115 km to the SSE, well into the Central Desert ecoregion of Baja California.

EUPHORBIA PETRINA S.Watson. (EUPHORBIA-CEAE). Ensenada Mpio. South of Miller's Landing and Rosarito and north of Villa Jesús María; along Mex. Hwy. 1; sandy, saline shoulder of the highway. 28.40666° N, 113.98970° W, elevation 37 m, 21 April 2017, *Rebman 33077* (SD). Ruderal vegetation with *Astragalus fastidius* M.E.Jones, *Chenopodium murale* L., *Malva parviflora* L., and *Mesembryanthemum crystallinum* L.

Previous knowledge. An uncommon native in Baja California, found in the Lower Colorado Desert ecoregion of northeastern Baja California, and also found on various islands in the Gulf of California as far south as Isla Partida off Baja California Sur. It is also found in Sonora and Sinaloa on the Mexican mainland.

Significance. This is a range extension of 212 km. south on the mainland of the peninsula from a specimen collection near San Felipe. It is the first collection from the Central Desert ecoregion and the first from the Pacific drainage in Baja California.

FRAXINUS PARRYI Moran. (OLEACEAE). Ensenada Mpio. Northwest end of Laguna El Caporal: west of Laguna El Islote and Laguna Chapala; in a small canyon on the northwest side of the dried lake and on lower slopes of the limestone cliffs of the

canyon. 29.26960° N, 114.59022° W, elevation 365 m, 23 April 2017, *Rebman 33116* (SD). Central Desert/Sage Scrub vegetation with *Aldama purisimae*, *Ambrosia chenopodiifolia*, *Artemisia californica*, *Bahiopsis laciniata*, *Encelia asperifolia*, *Fouquieria columnaris*, *Lycium* sp., and *Pachycereus pringlei*.

Previous knowledge. This species is a near-endemic to northern Baja California, with a small population in southern San Diego County. In northwestern Baja California it is often a dominant species in Chaparral and Coastal Sage Scrub plant communities.

Significance. This is a range extension of 116 km to the SSE from a previous collection north of El Rosario. This extends the range well into the Central Desert ecoregion. This population consists of many relatively large and healthy-looking individuals.

GILIA ANGELENSIS V.E.Grant (POLEMONIACEAE). Ensenada Mpio. Vicinity of a small vernal lake east of San José de la Piedra and south of Rancho El Llano; dry wetland area. 29.30434° N, 114.66959° W, elevation 420 m, 23 April 2017, *Rebman 33142* (SD). Central Desert vernal lake vegetation with *Aldama purisimae*, *Amblyopappus pusillus*, *Ambrosia chenopodiifolia*, *Bromus rubens*, *Deinandra fasciculata*, *Lasthenia gracilis*, *Lycium californicum*, and *Marsilea vestita*.

Previous knowledge. This native is found uncommonly in northwestern Baja California as far south as the vicinity of El Rosario (Rebman et al. 2016). It is also found as far north as the San Francisco Bay region in California.

Significance. This is a range extension of 130 km to the SSE, well into the Central Desert ecoregion of Baja California.

MALACOTHRIX COULTERI Harv. & A.Gray (ASTERACEAE). Ensenada Mpio. Vicinity of large vernal lake (Laguna Grande): east of San José de la Piedra and south of Rancho El Llano; northern side of dry lake bed. 29.33676° N, 114.64923° W, elevation 428 m, 21 April 2017, *Rebman 33066* (SD). Central desert vernal lake margin vegetation with *Ambrosia pumila* A.Gray, *Deinandra fasciculata* Greene, *Euphorbia albomarginata* Torr. & A.Gray, *Hoffmannseggia glauca* (Ortega) Eifert, and *Schismus barbatus* (L.) Juel.

Previous knowledge. A widespread native in California, found in coastal, mountain, and desert areas. Also found in other states of the southwestern USA and reported from South America. There is a single historic collection (*M.E. Jones 3708* from 1882) in the state of Baja California, from the area of Tijuana.

Significance. This is a range extension of 250 km to the SSE on the Baja California peninsula, and confirms this species' presence in the Central Desert ecoregion, where it had previously been reported

(Rebman et al. 2016), but never collected. It was seen in more than one location on this trip, and in considerable numbers.

POA SECUNDA J. Presl subsp. *SECUNDA* (POACEAE). Ensenada Mpio. Northwest end of Laguna El Caporal: west of Laguna El Islote and Laguna Chapala; in a small canyon on the northwest side of the dried lake and on lower slopes of the limestone cliffs of the canyon. 29.26960° N, 114.59022° W, elevation 365 m, 23 April 2017, *Rebman 33115* (SD). Central Desert/Sage Scrub vegetation with *Aldama purissima*, *Ambrosia chenopodiifolia*, *Artemisia californica*, *Bahiopsis laciniata*, *Encelia asperifolia*, *Fouquieria columnaris*, *Lycium* sp., and *Pachycereus pringlei*.

Previous knowledge. This widespread native perennial grass occurs in the western U.S., Canada, and South America. In Baja California it occurs on Guadalupe Island and on the peninsula in the northwestern portion as far south as Mesa San Carlos.

Significance. This is a range extension of 103 km to the southeast.

STIPA CERNUA Stebb. & Löve (POACEAE). Ensenada Mpio. Vicinity of Laguna La Guija: south of Cataviña and northwest of Laguna Chapala; west of Mex. Hwy. 1; sandy, saline flats on the eastern side of Laguna La Guija. 29.41455° N, 114.48302° W, elevation 690 m, 21 April 2017, *Rebman 33073* (SD). Central Desert vernal lake margin vegetation with *Ambrosia pumila*, *Atriplex canescens* (Pursh) Nutt., *Caulanthus lasiophyllus* (Hook. & Arn.) Payson, *Erodium cicutarium* (L.) L'Hér. ex Aiton, *Eulobus californicus* Torr. and A.Gray, and *Lycium californicum*.

Previous knowledge. This native grass is widespread in California. The known range in northwest-

ern Baja California extends south to near the Meling Ranch in the western foothills of the Sierra San Pedro Mártir.

Significance. This is a range extension of 210 km to the SSE and is the first record of *Stipa cernua* in the Central Desert ecoregion of Baja California.

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